



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of

Tadashi Ishida, et al.

Group Art Unit: 1794

Application No. 10/522,416

Examiner: BETELHEM SHEWAREGED

Filed: January 26, 2005

For: INK JET RECORDING MEDIUM

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER 37 CFR 1.132

I, Masaya KUSUMOTO, declare and state that:

1. In March, 1990, I was graduated from Hokkaido Asahikawa Technical High-School.

Since April, 1990, I have been an employee of MITSUI Chemicals, INC., and till the present time, I have been engaged in development work in emulsion for thermosensitive recording material and for ink jet recording material.

2. I am a co-inventor of the invention described in the specification of the above-identified application.

3. I explain the particle size measurement condition of polymers prepared in Experiments I, II and III described in the last declaration.

The particle size measurement of polymers prepared in Experiments I, II and III was carried out by a dynamic light scattering method with a particle size measurement apparatus (FPAR-1000, manufactured by OTSUKA ELECTRONICS Co., Ltd.), as described in the last declaration. However, if the solid content of polymer-containing liquid is high, for example 4% or 30%, the particle size of the polymer cannot be measured by this apparatus.

Therefore, the polymer-containing liquids obtained in Experiment I, II and III were diluted with deionized water so that the solid content was 300ppm, and then the particle size measurement of the polymers was carried out.

As a result, the particle size of the polymers prepared in Experiments I and II could not be measured because the polymer was dissolved in water and the scattering intensity was insufficient. On the other hand, the particle size of the polymer of Experiment III could be measured and was 70nm.

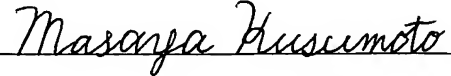
In addition, the polymer-containing liquids of Experiments I and II were diluted with deionized water so that the solid content was 1000ppm, and then the particle size measurement was carried out. As in the case of 300ppm, however, the scattering intensity was insufficient and the particle size could not be measured.

4. As described above, since the particle size measurements of the polymers were carried out on the same condition, i.e. solid content, it is possible to compare

the invention of the prior art and the claimed invention. From the results of the Experiments I and II, the hydrophilic ampholytic polymers of US6,361,768 can not be dispersed in water in the particle state because the polymers have a high hydrophilicity. Therefore, it is very difficult to form an ink receptive layer containing polymeric organic particles having an average particle diameter of 1 to 500 nm on a support by the hydrophilic ampholytic polymers of US6,361,768.

The undersigned declares further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

  
Masaya KUSUMOTO

This 2nd day of June, 2008